DOCUMENT RESUME

ED 407 815 EC 305 575

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TITLE Attributional Style as a Predictor of Academic Success for Students with Learning Disabilities and/or Attention Deficit Disorder in Postsecondary Education.
PUB DATE 21 Oct 96
NOTE 20p.; Paper presented at the International Conference of the Learning Disabilities Association (Chicago, IL, Feb. 19-22, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; *Attention Deficit Disorders; *Attribution Theory; College Students; *Grade Point Average; *Helplessness; Higher Education; Hyperactivity; *Learning Disabilities; Performance Factors; Questionnaires; *Student Attitudes

ABSTRACT

This report discusses a study of 31 postsecondary students (20 males and 11 females) with learning disabilities (LD) and/or with attention deficit hyperactivity disorder (ADHD) that examined college achievement and attributional styles. Students completed a combined Academic Attributional Style and Coping with Academic Failures Questionnaire. Participants were told to imagine themselves in each of 12 scenarios and to identify one major reason or cause for their active or passive response to the situation, then to answer three questions about their response and a behavioral question concerning the scenario. Results found that the students with LD and/or ADHD who demonstrated a negative attributional style (internal, stable, and global causes) for aversive events performed at a lower level academically than students with a more positive attributional style (external, unstable, and specific causes). The attribution the students made to failure significantly correlated with grade point average. The paper discusses Seligman's reformulated model of learned helplessness and indicates the research showed learned helplessness played a substantial role in the academic functioning of the students. Recommendations are made for environmental changes to reduce the effects of learned helplessness. (Contains 20 references.) (CR)

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Running head: ATTRIBUTIONAL STYLE

Attributional Style as a Predictor of Academic Success for Students with Learning Disabilities and/or Attention Deficit Disorder in Postsecondary Education

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October 21, 1996

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Abstract

Thirty-one (20 males and 11 females) postsecondary students with learning disabilities (LD) and/or with Attention Deficit Hyperactivity Disorder (ADHD) completed a combined Academic Attributional Style and Coping with Academic Failures Questionnaire. The reformulated learned helplessness model predicted that students with negative attributional styles (i.e., internal-stable-global attributions) experienced motivational, cognitive, and emotional deficits. The present study examined college achievement (grade point average) of students with LD and/or ADHD, predicting that students with negative attributional styles would achieve less academic success than students with positive attributional styles (i.e., external-unstable-specific attributions). Significant correlation was found between academic achievement and attribution style scores. Attributional style also predicted behavioral persistence measured by the Coping with Academic Failure Questionnaire.

Attributional Style as a Predictor of Academic Success for Students with Learning Disabilities and Attention-Deficit Hyperactivity Disorder in Postsecondary Education

Sixty-six thousand students with learning disabilities (LD) and Attention Deficit Hyperactivity Disorder (ADHD) are graduating from high school each year, with half of these students pursuing postsecondary education (Tenth Annual Report to Congress on the Implementation of the Education of the Handicapped Act, 1991). Students with LD and/or ADHD are the fastest growing category of students with disabilities attending colleges and universities. Of these students, 60% attend two year colleges and 40% attend four year universities (Henderson, 1992). Since 1985, the percentage of first year self-identified college students with LD and ADHD, has increased to 25% of the total population of students with disabilities registered on college campuses (Henderson, 1992). Jarrow (1991) believed this may be an underestimation of the actual number; she estimated that students who have self-identified with LD and/or ADHD account for as much as 35% to 50% of the postsecondary disability population.

Factors contributing to this steady increase of students with LD and/or ADHD include interest in further education after high school; the development of transitional plans at the secondary level; the realization that additional education or specialized training is important to keep pace in an ever changing economy; the recent increase in the availability of support services for students with learning disabilities on college campuses; and federal legislation that mandates the equal access to education for students with disabilities (Section 504 of the Rehabilitation Act of 1973; Public Law 94-

142 of 1975; The Individuals with Disabilities Education Act of 1990; and the Americans with Disabilities Act of 1990) (Gajar, 1992).

Many students with LD and/or ADHD experience academic difficulty at the postsecondary level for a variety of reasons. Students with LD experience myriad academic deficiencies ranging from problems in information acquisition (including problems in reading and acquiring verbal information), information processing (including difficulties with math calculation and information organization), and information presentation (including difficulties with written expression and information articulation) (Brinckerhoff, Shaw, & McGuire, 1993). For students with ADHD, academic difficulties are manifested by an inability to stay on task, sustain concentration during lecture or study, organize time and materials, and perform on nonstructured evaluations and testing (Nadeau, 1995). These difficulties may have a devastating affect on academic performance. Students with disabilities in direct conflict with the academic process may experience more than their fair share of academic failure. The attributional style for academic failure may determine which students will continue to put forth effort and which students will give up. The present study will apply the reformulated learned helplessness theory to academic functioning of students with LD and ADHD by comparing the attributional style scores with academic success and behavioral persistence in the face of academic failure. First a discussion of learned helplessness as measured by an individual's attributional style is presented, then the application of the theory to predict academic success and failure of students with LD and/or ADHD.

Learned Helplessness and Attributional Style

Most people encounter negative stressful events that can have a major impact on the course and direction of their lives. How persons cognitively formulate

explanations for negative events may color their attributional style for future encounters. Learned helplessness is the giving up reaction, the quitting response that follows from the belief that whatever you do does not matter. Attributional style is the manner in which you habitually explain to yourself why events happen. Attributional style is the modulator of learned helplessness (Seligman, 1990). The learned helplessness theory has evolved from early animal experiments attributing the behavioral persistence decrements to the uncontrollability of the aversive event; through the reformulation hypothesis attributing the helplessness symptomology to the subject's interpretation of the negative event; to the application of the learned helplessness theory to psychopathology and predicting cognitive deficits and performance decrements.

The Original Learned Helplessness Theory

In 1967, Overmier and Seligman found that dogs exposed to inescapable and unavoidable electric shocks in one situation later failed to learn how to escape the shock in a different situation in which escape was possible. The failure to learn to escape when escape was possible was attributed to the uncontrollability of the electric shocks. The uncontrollability of the electric shock seemed to cause motivational, cognitive, and emotional effects. In humans, a variety of studies involving inescapable noise and insoluble problems were used as agents to produce helplessness on both instrumental and cognitive tasks. An exposure to uncontrollable events interferes with the person's tendency to perceive cognitively a contingency relationship between a behavior and an outcome. Uncontrollable aversive events produce greater emotional disruption than do controllable aversive events. Based upon early research the first learned helplessness hypothesis was formulated:

When events are uncontrollable the organism learns

that the behavior and outcomes are independent, and
that this learning produces the motivational, cognitive,
and emotional effects of uncontrollability (Maier & Seligman, 1976).

Reformulation of Learned Helplessness Theory

Abramson, Seligman, and Teasdale (1978) presented a reformulation of the learned helplessness theory switching from the uncontrollability of the stimuli to what the organism attributes to the cause of the negative event. The mere exposure to uncontrollable stimuli was found to be insufficient to render the organism helpless; rather the organism must come to expect that outcomes are uncontrollable in order to exhibit helplessness. The reformulated theory also divides helplessness into personal helplessness and universal helplessness along with the three orthogonal attributional dimensions of internality, stability, and globality.

Measuring Learned Helplessness

Human learned helplessness researchers use an assessment of attributional style to explain cognitive, emotional, performance, and motivational deficits. Attributional style is the cognitive personality variable that reflects the habitual manner in which people explain causes of bad events that befall them (Peterson & Seligman, 1984). Researchers are interested in three dimensions of these explanations: internality versus externality, stability versus instability, and globality versus specificity. An internal cause points to something about the self (e.g., it's me), whereas an external cause points to the environment, other people, or circumstances (e.g it's the size of the class). A stable cause invokes a long-lasting factor (e.g.,it's never going to go away), whereas an unstable cause is transient (e.g., it was a one-time thing). Finally, a global cause is one that affects a wide domain of activities (e.g., it's going to undercut everything I do), whereas a specific cause is circumscribed (e.g., it has no

bearing on my everyday life) (Peterson & Barrett, 1987). A positive attributional style attributes negative events to external, unstable, and specific causes. A negative attributional style attributes negative events to internal, stable, and global causes. When people face frustration and failure and have a negative attributional style they tend to behave in a fatalistic and passive manner (Peterson & Barrett, 1987).

Attributional Style and Academic Success

Peterson and Barrett (1987) studied the correlation between attributional style and academic success of university freshman. They hypothesized that students who explained negative events with internal, stable, and global dimensions (e.g., a negative attributional style) would do poorly in their courses contrasted with those who attribute negative events to external, stable, and specific causes (e.g., positive attributional style). Very few college students pass through courses without experiencing some negative events a difficult problem set, a failed quiz, a lost textbook, or an unintelligible lecture. Successful students are those who respond with renewed effort, whereas unsuccessful students are those who give up. Attributional style will affect a student's characteristic approach to studying and learning. If they attribute negative events to something about themselves and to factors that are long lasting and pervasive ("I'm stupid"), then they are not going to work very hard for very long. However, if they attribute negative events to circumstances that are external ("the professor didn't think through the assignment"), then they are more likely to keep trying to excel. Studies have shown that particular causal attributions for success or failure often correlate with subsequent motivation and performance.

Freshman students who explain negative academic events with internal, stable, and global causes are at risk for poor grades during their first year in college. Peterson and Barrett's (1987) results converge with previous research by Weiner (1985) and

Dweck and Licht (1975). Peterson and Barrett's results imply that students at risk of academic failure can be identified by their attributional style before encountering difficulties. Their study linked academic achievement among university students with individual differences in attributional style. Students with an attributional style that invokes stable and global attributions for negative events respond to set backs in the classroom with passivity, whereas those who explain bad events in more circumscribed fashion make active attempts to improve their classroom performance (Peterson, Colvin, & Lin, 1992).

Students with LD and ADHD.

Students with LD and/or ADHD may experience more than their fair share of failure and set-backs in a postsecondary education. The nature of the disabilities is in direct conflict with the educational process. Students with LD and ADHD are likely to experience a non-contingency between response and outcome through repeated failures in spite of increased effort. Failure in this sense refers to not receiving a grade equivalent to the effort put into the subject. As with most disabling conditions, students with LD and ADHD must put forth more time and energy to achieve the same results as people who do not have educational obstacles. When students with LD and ADHD experience the non-contingency between effort and performance, motivational, cognitive, and emotional decrements may follow.

According to the original learned helplessness theory, students who experience no control over an aversive event (e.g., receiving a lower than expected grade) will experience diminished behavioral motivation. These students may experience cognitive deficits that would disrupt the their ability to learn future contingencies between response and reward. For example, a student who has learned that effort does not produce success fails to learn when increased effort could produce a higher

grade. The student will not likely learn that there is a connection between response and reward. The original theory also predicts that students who have been exposed to non-conditional outcomes will be affected by depressive emotional symptoms.

The reformulated learned helplessness model predicts that if students with LD and ADHD attributed failure to internal, stable, and global causes they will show decrements caused by learned helplessness. In an academic setting students with educational disabilities can experience differences in performance, or in the amount of effort needed for similar performance compared to relevant others (peers). This comparison could lead to personal helplessness, a belief that relief from an aversive event is not within an individual's own repertoire but is controllable by relevant others. Students struggling in classes where other classmates are succeeding, without undo effort, may experience personal/internalized helplessness. If the student's attributions for failure are stable and/or global, the learned helpless decrements will transfer to other classes and other situations.

The purpose of the present study is to apply to apply Seligman's (1986) reformulated model of learned helplessness to the causal attributions for negative events of students with LD and ADHD. Students with LD and/or ADHD with a negative attributional style should perform lower academically than students who have a positive attributional style in the fact of negative events.

Method

Participants and Setting

The participants were selected from a population of 230 undergraduate students with various LD and/or ADHD registered with Services for Students with Disabilities (SSD) at a major university in the southwest. The students met the statutory definition of having a disability under Section 504 of the Rehabilitation Act

and the Americans with Disability Act. All participants presented SSD with documentation by a licensed professional describing the nature of the disability; reports were verified by designated university personnel. All participants were currently enrolled in classes. Thirty-one students, 20 males and 11 females, with learning disabilities and/or Attention Deficit Hyperactivity Disorder participated in the research study. Participants' ages ranged from 20 to 43 years with a mean of 24.1 years. Twenty participants had a primary LD classification and 11 participants had a primary ADHD classification. Thirty seven students responded and participated in the survey. Six surveys were not used due to inadequate information or absence of a record of academic performance (grade point average). A total of 31 students completed the survey and had a current record of academic performance.

Materials

Academic Attributional Style Questionnaire (AASQ) (Peterson & Barrett, 1987). The AASQ is a 12-item questionnaire describing 12 negative school events and is patterned after the Attributional Style Questionnaire (Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982). The participant is asked to state in writing a single cause for each event and then to rate each cause on three orthogonal dimensions (internal-external, stable-unstable, global-specific) using a 7-point scale. The causes that are external, unstable, and specific receive low ratings (i.e., 1), while causes relating to internal, stable, and global receive high ratings (i.e., 7). Scores for each dimension are averaged across the 12 situations as well as across the three dimensions. This yields a combined composite score ranging from 1.0 to 7.0. Peterson and Barrett considered the reliability and validity information for the original ASQ as applicable to the AASQ.

Coping with Academic Failures. This questionnaire is used to gauge a student's behavior in response to academic failures. Students are asked to imagine themselves in each of the 12 situations used in the AASQ. The students are then asked to indicate their one major reaction in each case by choosing one of the following: (a) seek help from a professor or teaching assistant; (b) seek help from a friend, classmate, or tutor; (c) seek help from an academic advisor; (d) not seek help but work more; (e) not seek help but work less; (f) feel angry; (g) feel depressed; or (h) put it out of my mind (Aldwin, Folkman, Schaefer, & Lazarus, 1980). Reactions A through D reflect an active problem solving response to failure and reactions E through H reflect a passive or fatalistic response. If the participants choose an active response they receive a score of 2. If they choose a passive response, they receive a score of 1. Scores are summed over the 12 events and range from 12 to 24; low scores reflect a helpless response to failure and high scores reflect a active response (Peterson & Barrett, 1987).

Procedure

Students completed a combined Academic Attributional Style Questionnaire and the Coping with Academic Failures questionnaire. Participants were told to vividly imagine themselves in the 12 scenarios and to identify one major reason or cause for the negative scenario. They were asked to write that cause in the blank provided and to answer three questions about their response. Students then answered a behavioral question concerning the scenario (see Peterson & Barrett, 1987). Participants were given an unlimited but reasonable amount of time to complete the questions. All participants completed the questionnaires within one hour.

Results

Students who offered internal, stable, and global explanations for negative events performed poorly in college courses relative to students who invoked external,

unstable, and specific causes. Means and standard deviations of the AASQ scores are presented in Table 1.

Insert Table 1 here

A comparison of means and standard deviations showed that females and students with ADHD tended to have a more negative attributional style and lower GPA scores than males and students with LD, but no statistically significant differences were found. Cronbach's (1951) coefficient alpha was used to assess moderate internal reliability for individual and composite attributional scores. The alpha coefficients is .36 for the personal dimension, .82 for the pervasive dimension, .89 for the global dimension, and .66 for the combined attributional style scores.

The correlation between the combined attributional style score and GPA was -.48 (t = 2.97, p<.01), for personal attributional style score and GPA was -.35 (t = 2.01, p< .05), for pervasive attributional style score and GPA was -.43 (t = 2.54, p<.01), and for global attributional style score -.34 (t = 1.96, p<.05). The combined attributional style negatively correlated with the coping with academic failure measure -.22 (t = 1.70, p<.05). Coping with academic failure (CAF) did not correlate with the individual measures of personal, pervasive, or global attributional style. Correlations and significance levels are presented in table 2 for both the AASQ and CAF with academic success are presented in table 2.

Insert Table 2 here

Discussion

In this study, students with LD and/or ADHD who demonstrated a negative attributional style for aversive events performed at a lower level academically than students with a more positive attributional style. The attribution a student makes to failure significantly correlated with grade point average. The overall means for this sample compared to Peterson and Barrett's sample (1987) were greater: personal (4.85, 4.59), pervasive (5.02, 4.09), and global (4.42, 3.72) respectively. The overall increase in mean scores may indicate a larger or more significant role learned helplessness plays in the lives of students with LD and ADHD. The lowest mean score and greatest variability was found in the dimension of globality. The nature of the two disabilities, having its greatest affect in the academic setting, may not readily globalize to the rest of the student's life.

As predicted, significant correlations were found between grade point average and the four dimensions of attributional style studied. No significant relationships between measures of behavioral persistence, as measured by the CAF questionnaire, were found for the individual dimensions of personal, pervasive, or global; however, the combined attributional style dimension significantly correlated with this behavioral persistence measure. Restriction of range or sample size may be responsible for this phenomena; and/or since the sample mean scores (for the four dimension of attributional style) were all in the negative attributional style range, students would be predicted to have similar levels of behavioral persistence.

This present research and previous studies (e.g., Peterson & Barrett, 1987) confirm that learned helplessness plays a substantial role in the academic functioning of students. Students with LD and/or ADHD in a college setting are at risk for experiencing repeated failures. How a student responds to these failures determines

the amount of academic success the student experiences. Attributional retraining techniques can be used to a) change a helpless student's fatalistic negative attributional style to a more positive attributional mind set, and b) immunize students against the effects of future learned helplessness experiences. To reduce the effects of learned helplessness, colleges and university disability service offices can work to identify students who are displaying symptoms of helplessness and employ strategies to remediate the symptoms.

Helpless students can be identified through Attributional Style Questionnaires (ASQ). These questionnaires can be customized to fit the individual academic situation by the adjustment the questions within the ASQ format. Student's academic progress should be monitored to identify students who are at risk of failing. Poor academic performance may be an indication of helplessness. Students should also be monitored for behavioral persistence, are they using the campus resources available to them to supplement the educational process. If students are not making active efforts in the face of failure they may be exhibiting signs of helplessness.

Environmental changes are at the center of any attributional retraining. Through academic counseling students' schedules can be arranged to create an environment rich in successes and lean in failures. The academic advising must take in to consideration the nature of the specific educational disability so the student is not overwhelmed with an intensive schedule which emphasizes skills in direct conflict with the disability. For example, if a student with a Mathematics Disorder (DSM IV 315.1) has a semester schedule including Calculus, Chemistry, Physics, and English this schedule would create a potential environment rich in failure and lean in success. If this same student was advised to take only one mathematical based course a semester, the educational environment would more likely be rich in success and lean

failure. The environmental adjustment would hopefully be sufficient to promote behavioral persistence and change negative attributional thinking to positive. Once a student experiences control over his/her environment (i.e., experiencing a correlation between effort and performance) the disability support counselor can confront the fatalistic thinking and promote "self talk" that reflects attribution of internal, stable and global causes to positive experiences and external, unstable, and specific causes to aversive events.

Limitations of this study include a) combining the LD and ADHD populations together, b) sample size, and c) the homogeneous nature of the sample due to restrictive admission criteria of the university selected for the study. This study fails to answer questions concerning the differences between the two disability populations. The psycho/social and educational obstacles may be very different for students with LD compared to students with ADHD in a college setting. These differences may impact the students attributional style. The sample size was small and may not readily generalize to the population at large. This participant sample came from a restricted enrollment university and may not be representative of the wide spectrum academic ability usually seen in these populations.

Future research is necessary to gain a further understanding of role learned helplessness plays in the lives of students with LD and ADHD. Early intervention studies at the elementary and secondary levels may be an effective way to identify and immunize the student against the conditioning effects of learned helplessness in the next educational setting. Identification is only the first step; further research is needed to quantify the effects of attributional retraining in an educational setting. A matched sample of students could be compared to explore the effectiveness of attributional retraining and to maximize the efficiency of this intervention.

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Table 1

Means and Standard Deviations (of AASQ and CAF Scores)

	Total (n=31)	Males (n=20)	Females (n=11)	LD (n=20)	ADHD (n=11)
AASO					
Personal	4.85 (.77)	4.86 (.79)	4.92 (.73)	4.68 (.80)	5.23 (.57)
Pervasive	5.02 (.89)	4.91 (.90)	5.27 (.81)	4.91 (.97)	5.26 (.66)
Global	4.42 (1.13)	4.18 (1.20)	4.83 (.88)	4.13 (1.14)	5.06 (.80)
Combined Attribution	4.77 (.72)	4.65 (.75)	5.01 (.60)	4.57 (.75)	5.18 (.44)
GPA	2.68 (.44)	2.74 (.44)	2.56 (.40)	2.78 (.41)	2.47 (.46)
CAF	21.2 (2.09)	21.1 (2.47)	21.1 (1.44)	21.5 (2.06)	20.6 (2.19)

Correlation with Attributional Style and Academic Success

	Pearson's Product Moment Correlation - r GPA				
Attribution	Total Sample (N=31)	Males (n=20)	Females (n=11)	LD (n=20)	ADHD (n=11)
Personal	-.35*	-.31	-.44	-.23	-.38
Pervasive	-.43**	-.28	-.66*	-.42*	-.12
Global	-.34*	-.35	+.06	-.36	-.17
Combined Attribution	-.48**	-.41*	-.50	-.45*	+.42

*p<.05. **p<.01.

Correlation with Coping with Academic Failure and Academic Success

Personal	-.04	+.05	-.33	-.23	-.38
Pervasive	-.08	-.03	-.31	+.01	-.12
Global	-.17	-.21	-.13	-.03	-.17
Combined Attribution	-.22*	-.23	-.37	-.11	-.36
GPA	+.30*	+.27	+.44	+.15	+.42

*p<.05. **p<.01.